

- 10 -

Commissioner for PatentsApplication No. 10/057.750**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (currently amended) A central vacuum power unit comprising—in combination:

a canister having a sidewall and a hollow interior;

~~a chamber for collecting dirt and in fluid communication with an inlet for the working air loaded with dirt;~~

a first plate extending across said hollow interior, being mounted to said sidewall and being provided with a first opening,

a second plate extending across the hollow interior and being provided with a first opening,

~~a third plate extending across the hollow interior and being provided with a first opening;~~

a duct means having a sidewall, a hollow interior, a first end and a second end, the first end being mounted on the first plate and having the hollow interior of said duct means in fluid communication with the first opening of the first plate, the second end being mounted to the second plate and having the hollow interior of the duct means in fluid communication with the first opening of said second plate, said duct means supporting the second plate above the first plate, the first plate and the second plate defining with the sidewall of the canister and the sidewall of the duct means an acoustic chamber, said acoustic chamber being further provided with a lining of sound absorbing material and an outlet in the sidewall of the canister,

a motor-fan assembly within said canister and emitting noises and vibrations, said motor-fan assembly having an outlet connected to a pipe which is in turn connected in fluid flow communication within said acoustic chamber ~~resting against a seat made of resilient vibration absorbing material and mounted on the third plate; said motor fan assembly~~

- 11 -

Commissioner for Patents

Application No. 10/057,750

~~comprising an electric motor, a vacuum fan provided with an axial intake in fluid communication with the chamber for collecting debris, a tangential outlet and a piping having a first end in fluid communication with said tangential outlet, and a second end in fluid communication with the inside of the acoustic dampening chamber, said motor-fan assembly generating a flow of working air from the inlet of the chamber for collecting debris to the outlet of the acoustic dampening chamber;~~

~~filtering means positioned between the chamber for collecting debris and the air intake of the vacuum fan;~~

~~a first baffle means provided inside the acoustic dampening chamber and positioned to reduce direct motion of noise delivered from the second end of the piping to the outlet of the chamber;~~

~~means for generating a flow of cooling air for the electric motor and means for reducing the emission of noises outside the canister;~~

~~characterized in that a portion of said piping passes across a further opening is provided in the plate provided with the seat of resilient vibration absorbing material receiving the motor-fan assembly, said portion of piping having a vertical axis substantially parallel to the axis of the intake of the vacuum fan, so that any deformation of the seat due to the vacuum existing underneath the motor-fan assembly will allow the piping to slide freely in said further opening without solid contact with said plate.~~

Claim 2. (currently amended) A The central vacuum power unit according to claim 1, wherein ~~the third plate and the first plate are the same plate~~ exhausted working air from the motor-fan assembly is blown downwardly below the motor-fan assembly via said pipe into said acoustic chamber.

Claim 3. (currently amended) A The central vacuum power unit according to claim 1, wherein the ~~electric motor~~ motor-fan assembly is further provided with a cooling fan forcing a flow of cooling air from one end of the ~~electric motor~~ motor-fan assembly to an opposite end of said motor thereof, and wherein ~~said canister further comprise a fourth plate extending~~

- 12 -

Commissioner for PatentsApplication No. 10/057,750

~~across the hollow interior of the canister above the third plate, and a fifth plate extending across the hollow interior of the canister above the fourth plate, the fourth plate and the fifth plate defining with the sidewall of the canister a first chamber in fluid communication with a first opening provided in the sidewall of the canister and defining an inlet for the cooling air for the electrical motor and a second opening across which a portion of a casing of said electric motor is engaged, the third plate and the fourth plate defining with the sidewall of the canister a second chamber for the cooling air coming out the electric motor and evacuated outside the canister through an opening provided in the sidewall of the canister and in fluid communication with said second chamber said motor-fan assembly is located between said second plate and a third plate, the second plate and the third plate defining with the sidewall of the canister a second acoustic chamber around said motor-fan assembly, said motor-fan assembly exhausting the cooling air into said second acoustic chamber along which the cooling air has to flow before being vented outside of the canister through an outlet opening.~~

Claim 4. (currently amended) A The central vacuum power unit according to claim 3, wherein the fifth plate and the first plate are the same plate wherein said canister is provided with a wall mounting bracket, and wherein said wall mounting bracket defines a conduit in fluid flow communication with said outlet opening.

Claim 5. (currently amended) A central vacuum power unit comprising in combination:

a canister having a sidewall, a hollow interior and a debris collection chamber provided with an inlet for the receiving working air loaded with debris;

a first plate extending across said hollow interior, being mounted to said sidewall and being provided with a first opening,

a second plate extending across the hollow interior, being provided with a first opening and a second opening,

- 13 -

Commissioner for PatentsApplication No. 10/057,750

a duct means having a sidewall, a hollow interior, a first end and a second end, the first end being mounted on the first plate and having the hollow interior of said duct means in fluid communication with the first opening of the first plate, the second end being mounted to the second plate and having the hollow interior of the duct means in fluid communication with the first opening of said second plate, said duct means supporting the second plate above the first plate, the first plate and the second plate defining with the sidewall of the canister and of the duct means an acoustic ~~dampening~~ damping chamber, said acoustic ~~dampening~~ damping chamber being further provided with a lining of sound absorbing material and an outlet in the sidewall of the canister;

filtering means positioned between the debris collection chamber and the duct means;

a motor-fan assembly emitting noises and vibrations, resting freely against a seat made of resilient vibration absorbing material and mounted on the second plate around the first opening of said second plate; said motor-fan assembly comprising an electric motor, a vacuum fan provided with an axial intake in fluid communication with the first opening of the second plate, a tangential outlet and a piping having a first end in fluid communication with said tangential outlet, and a second end in fluid communication with the inside of the acoustic ~~dampening~~ damping chamber; said motor-fan assembly generating a flow of working air from the inlet of the debris collection ~~tank~~ chamber to the outlet of the acoustic ~~dampening~~ damping chamber;

~~a first baffle means provided inside the acoustic dampening chamber and positioned to reduce direct motion of noise delivered from the second end of the piping to the outlet of the chamber;~~

means for generating a flow of cooling air for the electric motor and reducing the emission of noises outside the canister;

~~characterized in that wherein~~ a portion of said piping ~~passes across~~ extends through the second opening of the second plate and has a vertical axis substantially parallel to the axis of the intake of the vacuum fan, so that any deformation of the seat due to the

- 14 -

Commissioner for PatentsApplication No. 10/057,750

vacuum existing underneath the motor-fan assembly will allow the piping to slide freely in the second opening of the second plate without ~~solid contact with~~ directly contacting said second plate.

Claim 6. (currently amended) ~~A~~The central vacuum power unit according to claim 5, wherein ~~the a~~ pathway between the outlet of the piping and the outlet of the acoustic ~~dampening damping~~ chamber ~~represent~~ extends along a portion of a circle.

Claim 7. (currently amended) ~~A~~The central vacuum power unit according to claim 6, wherein said pathway is substantially annular.

Claim 8. (currently amended) ~~A~~The central vacuum power unit according to claim 5, wherein the duct means has a substantially vertical passage between its first end and second end, the first end being substantially co-axial with the first opening of the first plate, the second end being parallel and ~~not aligned~~ offset with respect to the first opening of the second plate.

Claim 9. (currently amended) ~~A~~The central vacuum power unit according to claim 5, wherein the acoustic ~~dampening damping~~ chamber and first baffle means are completely provided with a lining of sound absorbing material.

Claim 10. (currently amended) ~~A~~The central vacuum power unit according to claim 5, wherein a sleeve of resilient vibration absorbing material is mounted around the second opening of the second plate, said sleeve having an interior of such size and orientation to allow a free axial sliding of said portion of the piping passing across the second opening of said second plate while substantially preventing leak of working air from the acoustic damping chamber.

- 15 -

Commissioner for PatentsApplication No. 10/057,750

Claim 11. (currently amended) ~~A~~The central vacuum power unit according to claim 10, wherein said sleeve is mounted on an upper side of said second plate.

Claim 12. (currently amended) ~~A~~The central vacuum power unit according to claim 11, wherein said sleeve is mounted by gluing.

Claim 13. (currently amended) ~~A~~The central vacuum power unit according to claim 5, wherein the electric motor is further provided with a cooling fan forcing a flow of cooling air from one end of the electric motor to an opposite end of said motor, and wherein said canister comprise a fourth plate extending across the hollow interior of the canister above the second plate, and a fifth plate extending across the hollow interior of the canister above the fourth plate, the fourth plate and the fifth plate defining with the sidewall of the canister a first chamber in fluid communication with a first opening provided in the sidewall of the canister and defining an inlet for the cooling air for the electric motor and a second opening across which a portion of a casing of said electric motor is engaged, the second plate and the fourth plate defining with the sidewall of the canister a second chamber for the cooling air coming out the electric motor and evacuated outside the canister through an opening provided in the sidewall of the canister and in fluid communication with said second chamber.

Claim 14. (currently amended) ~~A~~The central vacuum power unit according to claim 13, wherein a set of ~~second~~ baffles is ~~further~~ provided between the inlet opening of the canister and the second opening of the fourth plate.

Claim 15. (currently amended) ~~A~~The central vacuum power unit according to claim 14, wherein said ~~second~~ baffles are provided with a lining of sound absorbing material.

Claim 16. (currently amended) ~~A~~The central vacuum power unit according to claim 13, wherein the second chamber is provided with a lining of sound absorbing material.

- 16 -

Commissioner for PatentsApplication No. 10/057,750

Claim 17. (currently amended) ~~A~~The central vacuum power unit according to claim 13 wherein the inlet of the first chamber and the outlet of the second chamber are each provided with an outer muffler provided with a lining of sound material therein.

Claim 18. (currently amended) ~~A~~The central vacuum power unit according to claim 17, wherein both mufflers are provided in a hollow member having parallel conduits, each conduit being in fluid communication with the exterior of the canister at opposite ends of said member, and being respectively in fluid communication with the inlet of the first chamber and the outlet of the second ~~member~~ chamber.

Claim 19. (currently amended) ~~A~~The central vacuum power unit according to claim 18 wherein said hollow member further defines means for hanging the central vacuum power unit to a wall.

Claim 20. (new) A central vacuum power unit comprising:
a canister having a sidewall, forming a hollow interior, first and second plates extending across said hollow interior, a central duct extending between said first and second plates, said central duct being in fluid flow communication at opposite ends thereof with respective openings defined in said first and second plates, said first and second plates defining with the sidewall of said canister an acoustic chamber about said central duct, said acoustic chamber being provided with a lining of sound absorbing material and having an outlet for exhausting air therefrom, and a motor-fan assembly within said canister, said motor-fan assembly having an outlet connected in fluid flow communication with said acoustic chamber.